May 9, 2017

House Energy Committee
Lansing, Michigan

Re: Background on renewable energy and wind resources

Dear Representatives,

The purpose of this testimony is to provide the committee some background on renewable energy and wind resources in Michigan. Renewable energy has provides a number of benefits to Michigan's residents including over $3 billion in economic development, cleaner air, lower rates, and greater rate stability due to the availability of long-term fixed costs.

Cleaner Air

As Michigan has transitioned to cleaner energy air pollution in Michigan has been dropping. Power plants make up 85% of total sulfur dioxide emissions in the state from smokestacks. Those emissions are down 60% since 2008, a reduction of almost 150,000 tons a year. Nitrogen oxide emissions are down 50,000 tons, a 50% reduction. Particulate matter (PM) emissions are also down almost 50% from power plants. This is good news for Michigan residents who suffer from asthma, cardiovascular disease, and diabetes. Those emissions were tied to 180 premature deaths, hundreds of other hospital visits and tens of thousands of asthma episodes for Michigan residents. One of the reasons for having a renewable portfolio standard was that these costs are otherwise recognized by energy "markets".

Low, stable prices

In 2016, the MPSC reported regarding the implementation of PA 295 (2/12/2016):

> "A recent contract approved by the Commission for new wind capacity has levelized costs lower than $45 per MWh, which is about 10 percent less than the least expensive levelized contract prices from 2011 and half of the levelized cost of the first few renewable energy contracts approved in 2009 and 2010." (p.29)

The contract referred to by the MPSC was for an approval of a wind contract by Consumers Energy. In that request for approval, Consumers Energy stated the wind contract in question was below their average power supply cost recovery charges (or, below the marginal costs of running traditional coal and natural gas facilities). In some cases, utilities have been offered fixed price contracts at these costs for 20 years. In 2016, Consumers Energy decided not to enter into a wind contract which its own analysis predicted would have saved ratepayers more than $75 million.

Federal subsidies have helped lower the cost to ratepayers of some renewable resources. They are being phased out but will not have a significant impact due to dropping costs.

Michigan locational requirement for renewable energy is legal

Under Michigan law, renewable energy used to meet our standard must be generated in Michigan, or within the service territory of a Michigan utility with a few enumerated exceptions which represented existing contracts.

No one has challenged the current standard and therefore it is still consider valid and constitutional. The issue of the constitutionality of Michigan's law was not the issue before a federal judge which stated his opinion about our law. This language, known as "dicta" carries no legal effect in Michigan.

The analysis by Judge Posner and other federal cases have not explored the unique nature of electricity as a "product" and that due to its temporary nature, must be generated in somewhat close proximity to where it is going to be used. It is important to note that MISO requires zone 7 (Michigan's Lower Peninsula) to generate 93% of all power we generate within zone 7 to ensure reliability. That number matches the renewable energy currently used to meet our standard. Although other states have cheaper renewable energy costs, it would cost more than Michigan renewable energy if transported to Michigan.

Wind energy and capacity

As, MEC outlined in its presentation to committee earlier this year, Michigan uses its last 15% of capacity less than 1% of the hours in a year (60-80 hours). Above our peak use, MISO requires that we maintain a reserve margin of around 15%. This is in case we have a unplanned outage at any power plants – nuclear, coal, natural gas or a renewable asset.

Wind is an intermittent resource, but predictable resource. Wind developers predict their output the following day and grid operators use these projections to schedule other resources. MISO attributes a 15.6% capacity credit for wind resources. That number represents how much we can rely on the resource to meet peak demand. So, although wind resources are have lower capacity credits than other sources on peak days, the other 99% of the hours of the year, it provides low cost energy that does not fluctuate with the price of fuel or new regulations.

Summary

Renewable resources offer a number of benefits to Michigan customers. Those include economic development impacts, cleaner air, reductions in greenhouse gases, lower rates, and greater rate stability due to the availability of long-term fixed costs.

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